

Influence of pH and temperature on in vitro mycelial growth performance of wild edible *Schizophyllum commune* of northern Malaysia

Abstract

The mycelial growth performance of wild isolated *Schizophyllum commune* of Northern Malaysia on Potato Dextrose Agar (PDA) and Malt Extract Agar (MEA) was first compared in order to be further used in the study. A total of 7 and 13 days was required by the mycelial to fully colonized MEA and PDA in the petri dish respectively. Hence MEA was selected in investigating mycelial growth rate at different pH (5 to 10) and different temperature (20, 25, 30, and 35?). Results showed that wild *S. commune* growth rate was the highest (10.91 ± 0.37 mm/day) on MEA at pH 6 with incubation temperature of 30?. Biomass dry weight, pellets diameter, and final pH in Malt Extract Broth (MEB) at different pH were examined under optimal growth temperature (30?) after 14 days of liquid state fermentation. High biomass dry weight was obtained from culture incubated at pH 5 (4.84g/L) and 6 (4.87g/L) and the longest pellet diameter was obtained at pH 6 (45.6mm). There were decrements in pH value observed after end of the liquid state fermentation. It was expected that the growth data gathered in the study can be utilized later to design optimal pH and temperature conditions for artificial cultivation of *S. commune*.